LB 3411
.R65
Copy 1

Compliments of Author

Medical Inspection of Schools.

BY

DR. WM. L. ROBINS,

WASHINGTON, D. C.

REPRINT FROM
MEDICAL REVIEW OF REVIEWS,
FEBRUARY, 1900.

LB
.R6

P.
Author.
(Person).

58168

MEDICAL INSPECTION OF SCHOOLS.*

BY DR. WM. L. ROBINS, WASHINGTON, D. C.

Assistant in Nervous Diseases Clinic, Emergency Hospital; Formerly Specialist, Children's Diseases, Emergency Hospital.

It is a source of gratification to note that at least a few cities of this country have come to recognize the fact that it is our sacred duty to take every possible precaution to prevent the spread of contagious diseases among children. So long as the children remain at home, the responsibility of giving this protection rests upon the parents. But as soon as the children are sent to school they are for the time being wards of the State, and should certainly have its protection.

Dr. Jaques, of the Chicago Health Board, has well said: "Children at home are usually infected by those members of the family who are at work or in school; hence, the prevention of the spread of contagion in the school or factory is one of the most efficient ways of protecting the

* Read before the East Washington Citizens' Association, December 5th, 1899.

home." It has been estimated by an authority on the subject, that 70 per cent. of the epidemics of contagious diseases might be prevented by a proper system of medical inspection of schools.

Probably the first trial of medical school inspection was made in Boston in 1894: "In a primary school of 40 pupils, 14 were attacked with diphtheria in eighteen days. Of the 14 cases, 7 were discovered by the medical inspector. All suspicious cases were sent home to be cared for by their family physicians. The next morning every child was examined and cultures taken. From Thursday to the following Monday the class was dismissed, and the rooms were disinfected and cleaned. For ten days after his return, the throat of every pupil was examined by the inspector when the children first assembled in the morning, and no pupil who had been absent with any suspicious symptoms was allowed to return until it was proved by a negative culture that there could be no danger. As a result of these measures not a single case of diphtheria resulted beyond those known to have been infected at the time the epidemic was discovered."

During further preliminary work in Boston, out of 8,964 pupils examined

1,156 were found to be too ill to remain in school, and of the latter number 267 were suffering from contagious and infectious diseases.

After such conclusive proof of the value of medical inspection of public schools, it is needless to say that Boston now has a system of daily medical inspection—indeed, it is being introduced in some European cities, we are told, as the "Boston plan."

The Twenty-fourth Annual Report of the Health Board of Boston very pointedly says: "It has been demonstrated that there are not only many cases of contagious diseases to be found in schools, and which require early recognition and removal, but that there are large numbers of school children whose illness and whose disposition by the teachers requires the decision of a competent physician. The work has disarmed all opposition and so far as we know has the approval of the school government and the community at large, and has fully met the expectations of the Board of Health. In fourteen months out of 16,790 pupils examined, 10,737 were found to be more or less sick and 2,041 were found too ill to remain at school." Some of the diseases were as follows:

Diphtheria	77	Scabies	47
Scarlet fever	28	Mumps	47
Measles	116	Whooping cough	33
Chicken pox	28	Congenital syphilis	8
Pediculosis (lice)	69		

For the information of the physicians of Boston, the Board of Health of that city issued the following circular Jan. 1, 1896:

"*To the Physicians of Boston:*

"GENTLEMEN— . . . The Board of Health has appointed fifty physicians who are known as School Inspectors and agents of the Board of Health. Their duties are to visit the public schools daily, to examine all sick or complaining pupils, and to advise the teachers concerning them. They will decide all questions concerning the school attendance of such children as live within the same building, but not of the same household, in which there is a case of contagious disease. Such cases must either be so isolated as not to endanger the health and liberty of other families, or they must be taken to a hospital. . . ."

Then follows a list of the school inspectors with their addresses.

Early last year, Dr. Durgin, of Boston, an authority on this subject said: "I am satisfied, after two years and seven months

work that it would be hard to find a field for medical inspection and supervision which presents equal facilities for detecting diseases amongst congregated bodies or which offers more *encouraging results*."

In Boston the average number of cases of diphtheria during the eight school months of the twenty years from 1877 to 1896 inclusive, was 2,772, while for the four months of little or no school the average was 2,071. The average number of cases of scarlet fever during the same period, for the school months, was 2,779, and for the four summer months it was only 1,191.

The following diseases were discovered by the medical inspectors of Boston, during the year 1898:

Specific infectious diseases	275
Oral and respiratory diseases	2,722
Diseases of the ear	102
" " eye	402
" " skin	16,709
Miscellaneous diseases	2,912
Total	23,122

The specific infectious diseases were as follows:

Diphtheria	8	Mumps	31
Scarlet fever	16	Chicken box	65
Tuberculosis	9	Meningitis	1
Measles	26	Influenza and grip	20
Whooping cough	96	Syphilis	1
Malaria	5		

Number of pupils examined in the schools	50,991
Number recommended to be sent home	7,896
Number of consultations with teachers (about pupils returning to school, etc.)	1,783

A preliminary investigation in New York in 1896 demonstrated the fact that the best results were obtained by securing the absence-list of a class in which a case of contagious disease had occurred, and visiting the absent children to learn the causes of absence. Eighty-five families with scarlet fever or diphtheria visited showed 15 cases of scarlet fever and 19 of diphtheria (in all 34 cases out of 85) in which the first case in the family had been a school child. "A statement of all known cases of scarlet fever in one school during one season showed that 13 cases out of 20 would have remained unknown if the absence-list had not been investigated. Of these 13 cases, 4 *did* return to school, and, although in a condition to spread contagion, would have remained had they not been found by the medical inspector." A similar experience was met with in an epidemic of measles.

In New York and Boston the medical school inspectors are separate and distinct from the district inspectors of the Health

Board, but both operate under the authority of that body.

The school inspectors' duties are, in short, as follows: He visits the schools of his district daily at the opening of the session, examines all pupils whom the teachers have found to be ill or complaining and advises the teachers concerning them. He makes a record of their ailments in a book kept by the principal and forwards daily and weekly reports to his chief. The rights of the family physician are at no time encroached upon. No children are prescribed for by the medical inspector at any time, unless it be in an emergency when necessity compels quick action from a humanitarian standpoint. He very naturally excludes all contagious diseases from the school; and he sends a note to the family physician or a card to the parents of the children, stating the cause of exclusion. Blanks, wooden tongue depressors (which are destroyed after being used once), culture outfits, etc., are furnished at the office of the Chief Medical Inspector. Twenty-seven drug stores in the city of Boston distribute culture tubes to the medical inspectors or any other physicians who may need them.

New York has 150 medical school inspectors who visit the schools daily. During the first three months of their work 63,812 children were examined, and of this number 4,183, or over six per cent., were excluded for contagious diseases.

A New York authority has said that the amount saved in coffins for the "potter's field" will more than counterbalance the expense of medical inspection of schools in that city.

In Philadelphia, where daily medical inspection has not yet been instituted, in thirteen school weeks 1,464 visits were made to 350 schools, with the following results: Skin diseases (62 of these contagious), 192; sore throat, 140; diphtheria, 77; whooping-cough, 18; chicken pox, 13; parasitic diseases of the head, 66; scarlet fever, 6; ring worm, 60, and many others of minor importance.

Through the efforts of Miss Keene, chairman of the Committee on Medical Inspection of Schools of the Public Education Association of Philadelphia, the following resolution was passed at the meeting of that Association November 21st, 1899:

WHEREAS, The contact of children at school is a prolific cause of transmission of contagious dis-

ease, and, whereas, daily medical inspection of all ailing children has been found to be an efficient curb of contagion, and also to detect many other illnesses prejudicial to school attendance,

Resolved, That city councils are earnestly requested to make possible a daily inspection of the ailing children of all public and parochial schools by the appropriation of $45,000 to the Bureau of Health for this purpose.

Armed with this resolution, a committee of the Public Education Association urged the Board of Health to move in earnest for a paid corps of 150 physicians. Their arguments were, first, that the parochial schools should be included, and only the Bureau of Health can include them; second, the work is not experimental, since other cities have *completely proven its value;* third, a paid corps will be more permanent, more responsible, better organized than a volunteer corps can be. The item of $45,000 for the Bureau of Health for Medical Inspection of Schools is now in the hands of the Finance Committee of Councils, and those interested in the measure have hopes of its passing.

It is estimated that the *average daily attendance* of children in the public schools of Philadelphia is about 128,000, while that of the parochial schools is about

28,000, making a grand total of 156,000 children to be attended daily by 150 inspectors. Here, as in other cities, they have allowed about 1,000 children, or three school houses to each inspector.

Last month (November) the Board of Education of Chicago, at the suggestion of Dr. Christopher, decided to employ fifty physicians as daily medical inspectors. Dr. Christopher's plan is to bar out all children who have been absent from school four or more days, till medical experts can determine whether they will spread contagion among their fellow pupils. He says: "A child may be slightly ill for a few days and then return to school apparently in good health, yet with the germs of the disease still in its system, and thus endanger all its school fellows. Its parents may never suspect it is suffering from diphtheria or scarlet fever. The annual expense will be *under* $35,000. During the summer the council urged that all the school buildings be disinfected. It was estimated that this would cost $25,000, yet it would not prove so effective as my plan. For the danger does not lurk on the walls or in the clothing nearly so much as is supposed. It is to be found chiefly in the children themselves. Then bar out the children, I

say, till it is certain they do not threaten their fellows."

The Commissioner of Health of Chicago says: "The first attempt at supervision of the health conditions of 200,000 of the population at the most impressionble age-period has resulted in so much benefit that the department will continue the work to the full extent of its resources. Our work in the medical inspection of school children I regard among the most important duties we have in hand."

In Chicago, for the school year ended June 30th, 1898, 2,372 school inspections were made mainly on physicians' notifications of diphtheria or scarlet fever among scholars in attendance. These led to the inspection of 2,405 homes in which contagious diseases were found to exist. In twenty-seven homes no physician was in attendance, and these were furnished medical assistance by the inspectors. A total of 1,272 notifications were sent to principals of schools, and an aggregate of 116,920 scholars exposed to infection were examined; of this number 5,943 were excluded from school attendance for from three to five days for further observation; only nineteen of these developed diphtheria, and five developed

L. of C.

scarlet fever. Only four medical inspectors were available for this service, and the aggregate expense to the city for their salaries while thus employed was $2,963.

Under date of December 2d, 1899, the Chief Medical Inspector of Chicago writes me that a system of daily medical inspection, similar to the plan now operated in Boston, will be instituted in that city by January 1st, 1900.

In St. Louis, as a preliminary trial, ten public schools were daily inspected, from October 10th to December 25th, 1898 (sixty school days), under the auspices and by the members of the Medical Society of the City Hospital Alumni. During this trial 1,565 pupils were examined, and of this number 156, or ten per cent., were sent home on account of some existing disease which was deemed dangerous either to the child himself or to his school fellows. About one-half of the dismissals for sickness were on account of infectious diseases. One pupil in 27 had some eye trouble. The concluding remarks of the report of the committee having in charge this trial are as follows: "Daily medical supervision will counteract many unfortunate conditions, will eradicate many more; intelligent and pains-

taking observance of basic sanitary laws is both possible and feasible; and the public should not condone neglect of these simple and wise policies. The right of the child to truly hygienic surroundings physical, in all that that implies to-day, as well as to truly hygienic surroundings mental, is paramount. Any selfish, partisan or otherwise narrow-minded act, that militates against full fruition in response to this demand—this right—is a crime."

Concerning the cost of medical inspection of schools, Boston employs fifty inspecters at a yearly salary of $200 each. New York employs 150 at $300 each.

Chicago has at present four medical inspectors, each of whom receives $75 per month. Miscellaneous expenses in Boston amount to about $50 to $60 per year. Proper cards for testing eyes can be purchased at about $75 per thousand, one thousand being usually sufficient.

Comparatively few children are ever well and strong after an attack of scarlet fever or diphtheria. These diseases probably cause more human suffering than the whole category of so-called children's diseases combined, for the reason that they are so frequently followed by kidney diseases, idiocy, epilepsy, and many other

conditions, thereby producing a complete physical and mental wreck.

Estimating a human life in this city at $900 to $1,000, if the percentage of deaths from contagious diseases in school children could be reduced to, say, even a fourth, and the number of preventions increased in proportion, what an enormous saving there would be to the District Government after all the expense of medical inspection had been deducted, to say nothing of the saving of suffering in homes, of insanity, idiocy, epilepsy and crime. An almost inestimable saving would be that of the cost of maintenance of our institutions for the insane and feeble-minded.

Let us hope that the day is not far distant when the Capital City of the Nation will awaken to the importance of this ideal charity.

BIBLIOGRAPHY.

1. Twenty-fourth Annual Report of the Health Dept., City of Boston.
2. Twenty-seventh Annual Report of the Health Dept., City of Boston.
3. Durgin: Boston Med. and Surg. Jour., April 9th, 1896.
4. Reports of N. Y. Board of Health, year ending Dec., 1896, pp. 85–86, 359–363, 77–79.
5. Archives of Pædiatrics, August, 1896.
6. Prescott: Annals of Gynæcol. and Pædiat., March, 1897, ss. 354–359.
7. Med. Review of Reviews, August 25th, 1897, ss. 400–401.

8. J. N. Bach: Med. News, January 8th, 1898, pp. 38–41.
9. Phila. Med. Jour., Feb. 5th, 1898, p. 221.
10. Channing: Boston Med. and Surg. Jour., January 13th, 1898.
11. Biggs: Address, Internatl. Med. Magazine, September, 1897.
12. Channing: Annals of Gynæcol. and Pædiat. March, 1897.
13. Jones, E. C.: Archives of Pædiat., Dec., 1897.
14. Zeitschrift fur Schulgesundheitspflege, Leopold Voss, Hamburg.
15. Report of Samuel Durgin, M.D., Boston, Annual Meeting (1897) Mass. Med. Society.
16. Jaques: Jour. Amer. Med. Ass'n., March, 12th, 1898.
17. Report of Health Dept., N. Y. City, Bureau of Sanitation, October, 1897 and 1899.
18. Eaton: Pa. Med. Jour., Sept., 1897, ss. 154–160.
19. Randall: Jour. Amer. Med. Ass'n, November 16th, 1897.
20. Randall: Jour. Amer. Med. Ass'n, September 7th, 1897.
21. Risley: Report to State Med. Society on Exam. of Eyes of School Children, July, 1881.
22. Risley: Norris and Oliver's Diseases of the Eye, V. II., ss. 353–418.
23. Bell, Alex. Graham: Special Schools for the Deaf, The Deaf Child, Winter, 1898.
24. Biennial Report Chicago Health Dep't for 1895–'96.
25. Boston Med. and Surg. Jour., Dec. 10th, 1896, Editorial.
26. Phila. Polyclinic, March 13th, 1897, Editorial by Randall.
27. Lancet, May 21st, 1898, Work at Crewe, Eng.
28. Allport: Jour. Amer. Med. Ass'n, June 4, 1898.
29. Keene, Miss Dora: Phila. Med. Jour., June 18th, 1898.
30. Phila. Med. Jour., April 9th, 1898, p. 623.
31. Phila. Med. Jour., June 11th, 1898, p. 1,079.
32. Jour. Amer. Med. Ass'n, January 8th, 1898, Problems in Feeding School Children.

33. Jour. Amer. Med. Ass'n, February, 1898, School Training of Youth.
34. Medical News, Jan. 8, 1898.
35. Lawson: Brit. Med. Jour., June 18, 1898.
36. Risley: Annals of Hygiene, May, 1890.
37. Risley: Report of Vineland Training School, 1886.
38. Edel: Deutsch Med. Wochenschrift, 7 July, 1898.
39. Shattinger: St. Louis Med. Rev., April 29, 1899.
40. Sharpe: St. Louis Med. Rev., April 29, 1899.
41. Keen: Public Health (Phila.), August, 1898.
42. Arnold: Annals of Gyn. and Pæd., Jan., 1898.
43. Homan, Shapleigh & Smith, St. Louis Med. Rev., January 28, 1899.
44. Baker (Cleveland): Med. Gaz., Nov., 1897.
45. Hippel: Ueber den einfluss Hygienischer Massregeln auf die Schulmyopie. St. Petersburg Med. Wochenschrift, I., 1899.
46. Schimumsky: Unterschungen des Gehœrs der Schulkinder Monatsch f. Ohren heilk., II., 1890.
47. Lorenz: Die Hentige Schulbankfrage, Vienna, 1888.
48. Allport: Jour. Amer. Med. Association, Jan. 22, 1898.
49. Allport: Review of Reviews, June, 1897.
50. Allport: North Amer. Pract., June, 1898.
51. Powell: Education, 1898.
52. Stewart: Unsanitary Schools and Public Indifference, Forum, Vol. XX, Page 103.

MEDICAL REVIEW OF REVIEWS.

DANIEL LEWIS, A.M., M.D., Editor.

A Monthly Review of Medical Literature, Including an Index Medicus.

Subscription, $1.00 per annum.

PUBLICATION OFFICE:

252 Madison Avenue, New York.

LIBRARY OF CONGRESS
0 020 313 768 0